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ABSTRACT

Categories of effective and ineffective behavior in regard to Goal Seven of the Quality Education Program (regarding creativity) are listed. Both the rationales for areas of effective student behavior and the categories of teacher strategies are also included. (See TM 001 375 for project description.) (MS)

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BOOKLET 7
DESCRIPTION

QUALITY EDUCATION PROGRAM STUDY

CREATIVITY

PENNSYLVANIA
GOAL SEVEN

AN ESEA TITLE III PROJECT
COORDINATED AND DIRECTED BY:
Office of the County Superintendent
Bucks County Public Schools
Division of Curriculum and Instruction
IN COOPERATION WITH:
The Pennsylvania Department of Education

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Q.E.P.S. STAFF

Raymond Bernabei, Project Coordinator

Donald L. Wright, Project Director

Ronald E. Lesher, Coordinator of Research

Elbert S. Solt, Associate Director-Bucks County

Russell D. Diers, Supervisory Assistant-Bucks County (1969-71)

Rosemary Tracy, Associate Director-Luzerne County

Kathryn Saunders, Supervisory Assistant-Luzerne County

William K. Keele, Associate Director-Allegheny County

Frances Martin, Supervisory Assistant-Allegheny County

Mary Rita Routh, Supervisory Assistant-City of Pittsburgh (1970-71)

Thomas O. Sheridan, Supervisory Assistant-City of Erie (1969-71)

Stephen S. Berr, Supervisory Assistant-Bucks County (1968-69)

Leonard Glassner, Supervisory Assistant-City of Pittsburgh (1968-70)

Therese Toflinski, Supervisory Assistant-City of Erie (1968-69)

PUBLIC, PRIVATE, AND PAROCHIAL SCHOOLS

Teachers, administrators, students, and parents in public, private, and parochial schools in the Commonwealth generally, and specifically the pilot areas of Allegheny, Beaver, Bucks, Erie, Luzerne and Westmoreland Counties and the Cities of Erie and Pittsburgh.

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For technical assistance with the Critical Incident Technique, data collection procedures, student and teacher behavioral specifications and related rationales.

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Robert Fitzpatrick, Research Scientist
Pittsburgh Office

REGIONAL EDUCATIONAL DATA PROCESSING CENTER

Albert M. Neiman, Director
Emmett W. Bock, Coordinator

PENNSYLVANIA DEPARTMENT OF EDUCATION

Bureau of Curriculum Development and Evaluation
John L. Kennedy, Director

Bureau of Educational Quality Assessment
Thomas E. Kendig, Director

Bureau of Research and Statistics
Paul B. Campbell, Director

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PREFACE

The Bucks County Schools have for some time been committed to improving the quality of the educational offerings for its youth. Characteristic of that commitment was the manner in which officials of the Pennsylvania Department of Education, Bucks County Public Schools, Luzerne County Public Schools, Allegheny County Public Schools, Penn-Trafford School District, Pittsburgh School District, and Erie School District joined together in 1966 to draft the proposal for the Quality Education Program Study (QEPS). Conceived as a complement to Pennsylvania's pioneering efforts to assess the quality of its schools, the study was designed to define and clarify the Ten Goals of Quality Education adopted by the State Board of Education in 1965.

The following booklet is a part of the story of how Q.E.P.S. went about its ambitious task, and the results of that effort. We trust this statement of the behavioral definitions for Pennsylvania's Ten Goals of Quality Education will serve as a guide for the evaluation and improvement of teaching and learning in the schools of the Commonwealth.

Dr. George E. Raab
County Superintendent
Bucks County Public Schools

INTRODUCTION

In recent years there has been an increased interest in goal definition in education. Most efforts toward the establishment and definition of goals seems to take the form of generalizations or descriptive statements. Little, if any, data is available concerning empirical methods for defining educational goals.

Until recently, the "Goals for Quality Education" were not defined in a coherent form. An analysis of this problem revealed that most stated goals have little exact meaning for the practicing educator. Frequently, goals are stated in such general terms that any educator could convince himself that these goals are the purpose that guide his program. Goals are statements of general educational intents. While it is not absolutely necessary for goals to be stated in performance terms, the more clearly these statements are described, the more readily we can develop valid indicators of pupil behavior.

The first step in constructing an instructional program centers upon the need for a set of objectives. An objective refers to the performance or change in behavior a pupil is to exhibit upon completion of instruction. Therefore, meaningful objectives should relate to the "Goals for Quality Education". If one is "to measure objectively the adequacy and efficiency" of educational programs, these objectives must be described in terms of not what the schools do, but in what children do. One must itemize the kinds of behavior that add up to the goals for quality education if we are ever to know how children progress toward the goals or how efficient an educational program may be in furthering such

progress. Specifying goals in this way poses practical problems.[1]

The formulation and adoption of Pennsylvania's Goals of Quality Education represents a major step toward the definition of the State's educational intents, making possible an assessment of its efforts toward the fulfillment of those intents. In an effort to further increase the utility of the goals to the practitioner and evaluator, the Quality Education Program Study was proposed to review, define, and clarify the Ten Goals. Funded in 1968 under E.S.E.A. Title III, Q.E.P.S. made a unique departure from the usual "armchair philosophy" or logical approach to goal definition by deciding to employ the Critical Incident Technique. This technique was used to collect empirical data to define the goals.

The QEPS staff collected critical incident data from teachers, students, and parents from various urban, suburban, and rural areas throughout the State. These data included both student behaviors indicative of achievement of the Ten Goals and teacher behaviors effective in helping students achieve these Goals.

The resulting descriptions or definitions for each of the Ten Goals include: (1) Student Behaviors, (2) Rationales or narrative explanations, and (3) Teacher Strategies. Also, for each Goal QEPS has developed needs assessment instruments to provide the practitioner with a mechanism to systematically gather information to assess its needs and assign priorities to those needs.

[1] Educational Testing Service. A Plan for Evaluating the Quality of Educational Programs in Pennsylvania, Volume One: The Basic Program. Princeton, New Jersey: ETS, Henry S. Dyer, Project Director, Chapter I, pages 1-4 (June 30, 1965).

It is hoped that the resulting products of three years of intensive work devoted to defining Pennsylvania's Ten Goals of Quality Education will provide various segments of the educational community with information and the means to continue to improve the quality of education for the students of Pennsylvania.

Raymond Bernabei
Assistant Superintendent
Bucks County Schools

Donald L. Wright
Project Director, Q.E.P.S.

PROJECT REPORTS

The following is a listing and brief description of the reports produced by the Quality Education Program Study:

Booklet A — Project Description
A description of the project including a background and overview and a detailed report of procedures used to collect, handle, and analyze the data. Includes an appendices.

Booklet B — General Needs Assessment
Instructions
General Needs Assessment Instrument for the Ten Goals.

Booklet C — Characteristics of Incidents and Their Reporters
Gives a tabulation of various characteristics of reporters for each category and sub-category of student behavior.

Goals One through Ten each have two reports. The first is a Description of the goals, containing three basic components: (1) the categories of student behavior, (2) rationales for the areas of effective student behavior, and (3) related teacher strategies. The second report is related to the Needs Assessment of that goal and contains: (1) Instructions, (2) the general needs assessment instrument for that goal, and (3) an analysis of instruments related to that goal. The booklets for the Ten Goals are:

	Goal One - Self Understanding
Booklet 1	Description
Booklet 1A	Needs Assessment
	Goal Two - Understanding Others
Booklet 2	Description
Booklet 2A	Needs Assessment
	Goal Three - Basic Skills
Booklet 3	Description
Booklet 3A	Needs Assessment

	Goal Four - Interest in School and Learning
Booklet 4	Description
Booklet 4A	Needs Assessment
	Goal Five - Good Citizenship
Booklet 5	Description
Booklet 5A	Needs Assessment
	Goal Six - Good Health Habits
Booklet 6	Description
Booklet 6A	Needs Assessment
	Goal Seven - Creativity
Booklet 7	Description
Booklet 7A	Needs Assessment
	Goal Eight - Vocational Development
Booklet 8	Description
Booklet 8A	Needs Assessment
	Goal Nine - Understanding Human Accomplishments
Booklet 9	Description
Booklet 9A	Needs Assessment
	Goal Ten - Preparation for a World of Change
Booklet 10	Description
Booklet 10A	Needs Assessment

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GOAL SEVEN

QUALITY EDUCATION SHOULD GIVE EVERY CHILD OPPORTUNITY AND ENCOURAGEMENT TO BE CREATIVE IN ONE OR MORE FIELDS OF ENDEAVOR.

"The notion of creativity has been variously defined. It is being used here to encompass worthwhile activities that a child initiates and pursues on his own--activities having an outcome that is perceived by the child himself and by others as a contribution to some part of his world. Such activities can be included in a wide variety of fields, not only the sciences and the arts but also the organization of human affairs and the development and exercise of salable skills in the production of any of a host of practical things that enrich our way of living.

It is not to be expected that the creative behavior of school children will, except in very rare cases, lead to wholly original productions. What is expected is that many children, if given the chance, will become involved in exploring ideas and ways of doing things that are new and exciting within their own world. The school should make possible this kind of rewarding experience for all children, and should judge its success by its ability to evoke in children a flexible and creative approach to human affairs."[1]

[1]Educational Testing Service. A Plan for Evaluating the Quality of Educational Programs in Pennsylvania. Volume One: The Basic Program. Princeton, New Jersey: ETS, Henry S. Dyer, Project Director, Chapter I, pages 1-4 (June 30, 1965).

SUMMARY OF THE AREAS OF EFFECTIVE BEHAVIOR

Goal 7: Quality education should give every child opportunity and encouragement to be creative in one or more fields of endeavor.

1. STUDENT PRODUCED AN EFFORT THAT ENRICHED HIS SCHOOLWORK (NOTE: THIS AREA DOES NOT INCLUDE INSTANCES IN WHICH MAJOR EMPHASIS IS PLACED ON A DESCRIPTION OF THE ITEM, OF WHAT OR HOW IT IS MADE).

2. STUDENT PRODUCED AN EFFORT UNIQUE BECAUSE THE METHOD USED WAS PREVIOUSLY UNTRIED BY HIM AND/OR DIFFERENT FROM THE ATTEMPTS OF HIS PEERS (NOTE: THIS AREA DOES NOT INCLUDE INSTANCES WHEN REPORTER STRESSES DESCRIPTION OF AN ITEM WITH NO STATEMENT THAT IT DIFFERED FROM ATTEMPTS OF PEERS).

3. STUDENT PRODUCED AN EFFORT AS A MEANS OF SELF-EXPRESSION, OR CREATIVITY FOR ITS OWN SAKE (NOTE: THIS AREA DOES NOT INCLUDE INSTANCES IN WHICH EMPHASIS IS PLACED ON THE DESCRIPTION OF THE EFFORT OR PRODUCT).

4. STUDENT RESEARCHED INFORMATION IN PRODUCING AN EFFORT OR ASKED FOR CRITICISM OR AID.

5. STUDENT PRODUCED AN EFFORT UNUSUAL IN SUBJECT MATTER, THEME, OR CONTENT.

6. STUDENT DEMONSTRATED EXPERTISE IN WRITTEN OR ORAL COMMUNICATION.

7. STUDENT PRODUCED AN EFFORT OF ARTISTIC OR UTILITARIAN MERIT, OR EXEMPLIFYING GOOD ORGANIZATION OR DESIGN.

8. STUDENT DEMONSTRATED MERIT IN THE PERFORMING ARTS OR IN A PHYSICAL ACTIVITY.

9. STUDENT DEMONSTRATED MERIT IN PROBLEM-SOLVING ABILITY.

10. STUDENT DEMONSTRATED ADEPTNESS IN SOCIAL INTERACTION SITUATIONS.

Goal 7/Summary - Effective

0. MISCELLANEOUS.

0.1 Miscellaneous, Goal 7 Effective.

0.2 Miscellaneous, other than Goal 7 Effective.

Goal 7: Quality education would give every child opportunity and encouragement to be creative in one or more fields of endeavor.

CATEGORIES OF EFFECTIVE BEHAVIOR

1. STUDENT PRODUCED AN EFFORT THAT ENRICHED HIS SCHOOLWORK. (NOTE: THIS AREA DOES NOT INCLUDE INSTANCES IN WHICH MAJOR EMPHASIS IS PLACED ON A DESCRIPTION OF THE ITEM, OF WHAT OR HOW IT IS MADE.)

   1.1 Student made an illustration or a model to enhance, illustrate or explain a class report.

      1.1-1 Student drew sketches to explain material in a report.

      1.1-2 Student, illustrating a report, made a model (including a scale model).

      1.1-3 Student made an illustration, chart, or model to enhance a written report.

      1.1-4 Student, doing an oral report, brought in illustrations to express ideas.

   1.2 Student made a visual aid, chart, movie, model, etc., based on, or that illustrated material discussed in class.

      1.2-1 Student made a bulletin board that illustrated or elaborated on a topic under class discussion.

      1.2-2 Student, to enhance a presentation by a school guest, made a model, sketch, etc.

   1.3 Student made a model, chart, etc., as a learning aid.

      1.3-1 Student, in attempting to explain or understand something, made a drawing or other visual aid (except when this is done in connection with a class project or report).

   1.4 Student made a chart that effectively illustrated class jobs or activities.

   1.5 Student made a suggestion to enliven class activity or interest.

   1.6 Student brought something to class for the purpose of enhancing class interest.

   1.7 Student originated and implemented an interesting or useful classroom activity (other than a play or concert).

Goal 7/Effective

1.8 Student, interested in a topic, requested materials presented in another class.

Goal 7/Effective

2. STUDENT PRODUCED AN EFFORT UNIQUE BECAUSE THE METHOD USED WAS PREVIOUSLY UNTRIED BY HIM AND/OR DIFFERENT FROM THE ATTEMPTS OF HIS PEERS. (NOTE: THIS AREA DOES NOT INCLUDE INSTANCES WHEN REPORTER STRESSES DESCRIPTION OF AN ITEM WITH NO STATEMENT THAT IT DIFFERED FROM ATTEMPTS OF PEERS.)

2.1 Student made something or tried something he had not tried before (excluding working in an art medium new to him).

2.2 Student, given an assignment, made a model or other object.

2.3 Student, given an assignment, made something different in method, material, or effect.

2.4 Student made something different in that it was useful.

2.5 Student stated a desire to or did work in an area or medium in the arts new to him.

2.6 Student went beyond the art class demonstration and incorporated his own ideas in his effort.

2.7 Student, in giving a presentation, developed content or method on his own, different from other students.

2.8 Student, given a writing assignment, chose a subject or added content different from the other students (not involving stylistic differences primarily).

2.9 Student did an original written work, based on, but different in form or content from, an identified source.

Goal 7/Effective

3. STUDENT PRODUCED AN EFFORT AS A MEANS OF SELF-EXPRESSION, OR CREATIVITY FOR ITS OWN SAKE (NOTE: THIS AREA DOES NOT INCLUDE INSTANCES IN WHICH EMPHASIS IS PLACED ON THE DESCRIPTION OF THE EFFORT OR PRODUCT).

3.1 Student decorated an item when it was apparently not required.

3.2 Student chose to do creative work in an art activity.

3.3 Student did an original art work (not necessarily of exceptional artistic merit.

3.4 Student made a film.

3.5 Student wrote a song.

3.6 Student hand-made an object (not necessarily original or meritorious).

3.6-1 Student assembled an object with premade materials.

3.6-2 Student made flower arrangement.

3.7 Student sewed an item, using a pattern.

3.8 Student prepared a food item.

3.9 Student arranged food he had prepared in an attractive appetizing manner.

3.10 Student wrote an original work.

3.10-1 Student wrote a poem.

3.10-2 Student wrote a short story or novel.

3.10-3 Student wrote a play.

3.11 Student produced an original work primarily to serve as a creative gift for someone.

3.12 Student added premade items or materials to decorate an object or a room.

3.12-1 Student decorated already prepared food with cutouts.

3.13 Student produced items for decorations.

3.14 Student decorated a bulletin board (not featuring a subject he had selected).

Goal 7/Effective

3.15 Student selected a unique costume, habit of dress; or student decorated his clothing in some manner.

3.16 Student chose and arranged a hair style for a person or occasion.

3.17 Student planned or implemented rearrangement of furniture in a room.

3.18 Student volunteered for or asked to do a creative activity.

3.18-1 Student asked for lessons in a creative area.

3.19 Student, after encouragement, attempted creative efforts.

Goal 7/Effective

4. STUDENT RESEARCHED INFORMATION IN PRODUCING AN EFFORT OR ASKED FOR CRITICISM OR AID.

4.1 Student did research to gain information in producing an effort.

4.1-1 Student did his own report on a subject matter, pursued on his own initiative, above his grade level.

4.1-2 Student, given an assignment, originated unusual content that represented a research effort.

4.1-3 Student did extra research to prepare for his job.

4.1-4 Student did research to find an interesting or suitable art project.

4.1-5 Student researched a procedure for a practical job and then carried it out himself.

4.1-6 Student researched and wrote an unassigned report in a foreign language.

4.2 Student wrote an original work and asked a teacher or other person for help, criticism, or evaluation.

4.2-1 Student wrote an original poem and asked for an evaluation of it.

4.2-2 Student wrote an original story and asked for criticism of it.

Goal 7/Effective

5. STUDENT PRODUCED AN EFFORT UNUSUAL IN SUBJECT MATTER, THEME, OR CONTENT.

5.1 Student selected an unusual subject, theme, or symbol for an object he made.

5.1-1 Student, given an assigned project, incorporated topical subject matter.

5.2 Student selected an unusual content, theme, or symbol for an art effort.

5.2-1 Student drew a picture of his original invention or other original object.

5.3 Student, inspired by contact with an idea, a book, or an art work did original art work related to the source of inspiration (not primarily as a means of self-expression or of enriching schoolwork).

5.3-1 Student drew a sketch or picture that represented or expressed a poem.

5.3-2 Student made a poster to promote something by illustration.

5.4 Student wrote an original work with unique content.

5.4-1 Student wrote his own work about a topical subject.

5.4-2 Student wrote original material to express his own ideas.

5.5 Student took photographs with unusual subject matter.

5.6 Student made a bulletin board featuring a specific subject he had selected.

5.7 Student developed an appropriate, unusual theme for an occasion.

5.8 Student made a food item that was constructed to represent a symbol, an object, etc.

5.9 Student used items from nature for decorative purposes.

5.10 Student presented a demonstration on a subject of interest to him (without emphasis on the <u>method</u> of presentation).

Goal 7/Effective

6. STUDENT DEMONSTRATED EXPERTISE IN WRITTEN OR ORAL COMMUNICATION.

6.1 Student wrote a more complex, more difficult product that was required or assigned (but the product was not necessarily original or unique).

6.1-1 Student, given an assignment, originated a different style, thereby changing content as well.

6.2 Student did original work judged to be beyond his grade level in quality of content and/or writing expertise.

6.3 Student wrote work which was unique because it demonstrated foreign language skills (except for work involving research).

6.4 Student communicated verbally easily and convincingly.

6.4-1 Student demonstrated verbal ability to "sell a product."

6.5 Student demonstrated ability to reason through the use of words.

6.6 Student dramatized the reading of written material.

6.7 Student dramatized verbally presented self-composed material.

6.7-1 Student delivered a "shock" opening statement to spur discussion.

6.8 Student demonstrated by verbal statement insight and original thinking in interpreting or evaluating written material.

6.9 Student wrote unusual phrases, headings, slogans for an effort.

6.10 Student wrote a work which was specifically suited to the situation.

Goal 7/Effective

7. STUDENT PRODUCED AN EFFORT OF ARTISTIC OR UTILITATIAN MERIT, OR EXEMPLIFYING GOOD ORGANIZATION OR DESIGN.

7.1 Student produced an art effort exemplifying artistic quality.

7.1-1 Student created an original art design.

7.2 Student made an interesting photographic display.

7.3 Student sewed an item considered hard to make, or that is beyond expected proficiency.

7.4 Student made a food item without a recipe or made up her own recipe.

7.5 Student sewed something original (not in response to a specific need, or that is exceptional for the use of readily available materials).

7.5-1 Student added original touches to a pattern.

7.6 Student made an object unusual in its construction or structural design.

7.7 Student made something to meet the needs of a specific situation.

7.7-1 Student made something to solve a space-use problem.

7.7-2 Student designed a costume for a specific application.

7.8 Student, in making or repairing an object, used unusual materials or common materials in an unusual way.

7.8-1 Student made a decoration in an ingenious way with readily available items, or with unusual items.

7.9 Student originated and sewed an item out of common, readily available materials.

7.10 Student used an especially meritorious method of presenting a topic.

7.11 Student, given a written assignment, originated a different method of visual presentation or organization.

7.11-1 Student originated an effective arrangement of materials.

SUMMARY OF THE AREAS OF EFFECTIVE BEHAVIOR

Goal 9: Quality education should help every child to understand and appreciate as much as he can of human achievement in the natural sciences, the social sciences, the humanities, and the arts.

1. STUDENT ADMIRED THE ACHIEVEMENTS, WORK EFFORTS, OR PERSONAL ATTRIBUTES OF AN INDIVIDUAL OR GROUP.

2.

Goal 7/Effective

8. STUDENT DEMONSTRATED MERIT IN THE PERFORMING ARTS OR IN A PHYSICAL ACTIVITY.

8.1 Student prepared, presented or directed a show, skit, etc.

8.1-1 Student directed a play he or she wrote.

8.2 Student acted in a play or performed a character.

8.1-1 Student imitated a recording star.

8.2-2 Student convincingly delivered a monologue.

8.3 Student performed an extemporaneous skit.

8.4 Student "played" by originating an imaginative, pretend situation.

8.5 Student used talent and knowledge to translate and perform a song in a foreign language.

8.6 Student improvised music.

8.7 Student wrote a song with meritorious characteristics.

8.8 Student prepared and presented a concert.

8.9 Student prepared and presented an original piano composition.

8.10 Student composed a ballet.

8.11 Student originated or performed a physical activity.

8.11-1 Student developed the movements for a cheer.

8.11-2 Student developed a dance routine.

8.11-3 Student developed a floor exercise routine for gymnastics

8.12 Student originated new games using standard equipment or new "plays" for an organized sport.

8.13 Student developed a different way to perform a physical activity.

8.14 Student demonstrated an athletic skill, learned on his own initiative, beyond the expected skill level.

Goal 7/Effective

9. STUDENT DEMONSTRATED MERIT IN PROBLEM-SOLVING ABILITY.

9.1 Student originated a game.

9.2 Student, confronted with a lack of equipment or other resources, thought of and utilized adequate substitute equipment, or restructured the situation to fit the available equipment.

9.3 Student suggested or utilized an operational procedure suited to a task or better suited than any previous one, or that adequately structured a previously unattempted task.

9.3-1 Student rethought a procedure, came up with a new, more workable idea.

9.3-2 Student assembled an object without directions.

9.4 Student originated a different (though not necessarily more effective) way of doing a job, solving a problem, etc.

9.4-1 Student originated a different way to do a mathematical operation.

9.5 Student experimented with or tested an idea.

9.5-1 Student experimented in that he tried to determine if a given process would work with different materials or in a different setting.

9.5-2 Student designed an experiment that would test a scientific principle.

9.5-3 Student originated a way to test social awareness of his fellow students.

9.5-4 Student worked mathematical puzzles.

9.7 Student demonstrated ingenuity by originating an activity that benefited others or himself.

Goal 7/Effective

10. STUDENT DEMONSTRATED ADEPTNESS IN SOCIAL INTERACTION SITUATIONS.

10.1 Student originated a social interaction situation not related to classroom activity.

10.2 Student desired or took a leadership role in a situation requiring interaction of people.

10.3 Student remembered and practiced an act of social nicety or courtesy.

SUMMARY OF THE AREAS OF INEFFECTIVE BEHAVIOR

Goal 7: Quality education should give every child opportunity and encouragement to be creative in one or more fields of endeavor.

3. STUDENT DEMONSTRATED HE DID NOT VALUE CREATIVITY OR SELF-EXPRESSION.

6. STUDENT DEMONSTRATED LACK OF EXPERTISE IN WRITTEN OR ORAL COMMUNICATION.

7. STUDENT PRODUCED AN EFFORT LACKING ARTISTIC OR UTILITARIAN MERIT (INCLUDING POOR METHOD OF PRESENTATION).

8. STUDENT DEMONSTRATED LACK OF MERIT IN THE PERFORMING ARTS OR IN A PHYSICAL ACTIVITY.

9. STUDENT DEMONSTRATED LACK OF MERIT IN PROBLEM-SOLVING ABILITY.

0. MISCELLANEOUS.

0.1 Miscellaneous, Goal 7 Ineffective.

0.2 Miscellaneous, other than Goal 7 Ineffective.

Goal 7. Quality education should give every child opportunity and encouragement to be creative in one or more fields of endeavor.

CATEGORIES OF INEFFECTIVE BEHAVIOR

3. STUDENT DEMONSTRATED HE DID NOT VALUE CREATIVITY OR SELF-EXPRESSION.

3.15 Student selected an inappropriate, aesthetically unpleasing habit of dress.

3.20 Student who had an opportunity to do a creative task, failed to act in a creative way or to complete a creative product.

3.21 Student copied the work of another source.

3.22 Student demonstrated a lack of interest in creativity by verbal statement.

3.23 Student demonstrated a lack of confidence in his own creative ability by verbal statement.

Goal 7/Ineffective

6. STUDENT DEMONSTRATED LACK OF EXPERTISE IN WRITTEN OR ORAL COMMUNICATION.

6.2 Student did original work that illustrated lack of writing expertise.

Goal 7/Ineffective

7. STUDENT PRODUCED AN EFFORT LACKING ARTISTIC OR UTILITARIAN MERIT (INCLUDING POOR METHOD OF PRESENTATION).

7.11 Student made a presentation with little or no emphasis on method of presentation.

7.11-1 Student did not arrange materials or arranged his materials in an ineffective manner.

Goal 7/Ineffective

8. STUDENT DEMONSTRATED LACK OF MERIT IN THE PERFORMING ARTS OR IN A PHYSICAL ACTIVITY.

8.2 Student demonstrated an inability to perform or dramatize a character.

Goal 7/Ineffective

9. STUDENT DEMONSTRATED LACK OF MERIT IN PROBLEM-SOLVING ABILITY.

9.2 Student, confronted with a lack of equipment, stopped working.

9.3 Student did nothing or used a relatively poor operational procedure rather than developing or adopting a better procedure.

9.4 Student was unable to originate a different (not necessarily more effective) way to do something.

9.6 Student failed to discover similarities or relationships in given ideas or failed to make comparisons.

9.6-1 Student, participating in a sport, demonstrated lack of foresight by inappropriate actions or by not doing what was indicated.

RATIONALE

Goal Seven - Area 1

STUDENT PRODUCED AN EFFORT THAT ENRICHED HIS SCHOOL WORK.

Description

The behaviors in this area primarily represent supplementation of reports or class discussion. A student demonstrates his ability to illustrate written or verbal material in concrete form; such as explanatory sketches, charts, maps, scale models or other interpretation. For an oral report a student might find illustrations to help express his ideas. Class discussion might inspire a bulletin board theme, a sketch, chart, or model as an illustration or visual aid.

Analysis

Students react imaginatively in many different ways both voluntarily and in response to suggestion. Creative responses occur at all age levels and in all subject areas. Some individuals, weak in verbal skills, are able to express their knowledge by using other talents and media. Others have well developed awareness of color, form, arrangement and design and create symbolic representations of people, things, and situations. By integrating knowledge acquired in one class to enrich the task in another, the child shows awareness of the relationship of one discipline to another.

Application

Teachers might make suggestions indicating various media that students might use or show other students. Students' visualizations should be noted and encouraged. Materials can be made available. Suggestions for using readily acquired materials are helpful. A student can be directed to reference sources for techniques. Teachers need to

RATIONALE

Goal Seven - Area 1

have on hand a "magic box" full of all sorts of items to provide the visual-minded student the tools needed. A file of clippings could be made available as well as discarded magazines as source materials for those whose homes might lack such items. The teacher should encourage the student in every way to express himself, and should take time to acknowledge the student's efforts by asking the student to display his work, to make a display for, or perform his particular talent in front of the class or school, etc., including letting him organize the activity.

For further suggestions see also "Teacher Strategies" section of this booklet, Areas: 1, 2, 3, 4 and 5.

RATIONALE

Goal Seven - Area 2

STUDENT PRODUCED AN EFFORT UNIQUE BECAUSE THE METHOD USED WAS PREVIOUSLY UNTRIED BY HIM AND/OR DIFFERENT FROM ATTEMPTS OF HIS PEERS.

Description

The behaviors in this area primarily indicate the student's ability to go beyond a class demonstration or assignment and incorporate his own ideas in his effort. A majority of the incidents reported were related to art class, or applied techniques learned in art class to efforts produced for other disciplines. In some instances, the student makes a model or other object rather than use one of the communication skills in his effort.

Analysis

To display behaviors of this type, the student must usually have will developed skills in various art and craft media, as well as the ability to incorporate his own ideas in a product. He must feel some freedom to express his ideas. He is normally motivated at least in part by a specific desire to be original, or by indications on the part of the teacher that originality is valued.

Application

When students are given the freedom and the encouragement to use what creative skills or talents they have they will successfully complete assigned tasks. The more flexible a teacher is, the more likely children are to use an imaginative approach to an assignment. Teachers can give assignments of a creative nature, including assignments to make or write something original, but without specific instructions on how it should be done or what exactly should be made. A teacher might allow or encourage students who lack skills in one medium to use another.

Goa RATIONALE

Goal Seven - Area 2

A teacher might give a class or a group of students the opportunity to plan and carry out an activity, project, play, or whatever. A teacher can give students a choice of subject style, or freedom to work on particular projects or assignments. When teachers provide a relaxed classroom atmosphere wherein they act as the resource person, the librarian, the critic rather than the authority figure, the students seem stimulated to use their imaginations more freely.

For further suggestions see also "Teacher Strategies" section of this booklet, Areas: 1, 3, 4 and 5.

RATIONALE

Goal Seven - Area 3

STUDENT PRODUCED AN EFFORT AS A MEANS OF SELF-EXPRESSION OR CREATIVITY FOR ITS OWN SAKE.

Description

Characteristicly, this area is a result of self-motivation or a volunteered activity. Rarely was it reported as a product of an assignment. The reporters related incidents of students demonstrating expertise in applying the techniques or skills learned in art, English, music, home economics, shop, or vocational classes in particular. Included were the use of film, foods, and clothing. Students demonstrated talents in arranging flowers and even hair. Many incidents were reported of students writing poetry, stories, and plays. Some students demonstrated a concern for the better use of space.

Analysis

The behaviors in this area are likely to continue long after the individual has left school. Such behaviors indicate the ability of the student to make practical use of skills learned in a classroom situation. While the efforts may not reflect exceptional artistic merit nor be particularly original nor meritorious or even feature a subject selected by the student, it is an attempt at voluntary creative effort. An important element in such behaviors is that it is motivated, not by the desire to comply or obey, but by the individual's commitment to the underlying value guiding the behavior. It is likely the student will continue to adapt and improvise in applying the skills he has acquired as a means of self-expression throughout his life.

RATIONALE

Goal Seven - Area 3

Application

The teacher can provide guidance in the form of basic instruction, directions, suggestions, and pointers. The teacher can encourage the student to try to continue his creative endeavors. The teacher can encourage volunteers by providing necessary materials and time for such activities as bulletin boards, creative writing, art, music, sewing, hair-dressing, etc. The teacher can help the student think things through themselves. The teacher, by emphasizing the process rather than the end product, encourages imaginative application of techniques and skills.

For further suggestions see also "Teacher Strategies" section of this booklet, Areas: 1, 2, 4, 6 and 7.

RATIONALE

Goal Seven - Area 4

STUDENT RESEARCHED INFORMATION IN PRODUCING AN EFFORT OR ASKED FOR CRITICISM OR AID.

Description

This area is closely allied to Goal Four (Interest in School and Learning). A student shows sufficient interest in a subject to do research in order to write a report, produce a model, chart, map, costume, prepare a speech, etc. In-depth study results in the student's producing a worthwhile effort while gaining a broader insight into the subject matter, often quite unusual for the age level involved. Students interested in developing their writing expertise show confidence in their teachers as critics by asking for help or evaluation.

Analysis

To carry out research to gain information, a student must have well developed skills in library arts, reading comprehension, and the ability to use the written word creatively. The student's interest in his investigation results in gaining both knowledge and experiencing satisfaction from engaging in the research. To ask for criticism of one's work is, in a sense, research to gain knowledge about the quality of the work and means of improving it. Required here is a mature capacity for accepting criticism in order to improve.

Application

Teachers can motivate students natural curiosity by giving them the opportunity to read material interesting to them. Teachers should observe the needs and interests of their students and promote their initiative and independence by their assignments. The teacher, when students state an interest in doing a specific creative effort can

RATIONALE

Goal Seven - Area 4

provide guidance in the form of basic instructions, knowledge of various methods, directions, samples, suggestions or pointers. The teacher should provide knowledge of the technique involved or examples of the creative efforts for a student, a group of students, or the class prior to having them do their own creative work on an assignment. The teacher can direct the students' discussion or investigation of possible ideas, subjects, etc. Competent criticism will result in a sense of satisfaction or achievement for the student.

For further suggestions see also "Teacher Strategies" section of this booklet, Areas: 4, 5 and 7.

RATIONALE

Goal Seven - Area 5

STUDENT PRODUCED AN EFFORT UNUSUAL IN SUBJECT MATTER, THEME, OR CONTENT.

Description

The behaviors in this area in general represent unusual selection of subject, theme, or content, by the student. The unusual material is incorporated into an original product expressing the student's ideas, interest, or feelings. While such creative efforts are ususlly the result of teacher motivation they occasionally may be a spontaneous reaction. Typically, the student works independently without immediate supervision. Reported were projects such as notebooks, dioramas, puzzles, posters, models, bulletin boards, and "show and tell" presentations. Students express their ideas, feelings, and reactions by writing their own poetry, prose, or plays.

Analysis

Students motivated to express themselves creatively may apply their own observations and experiences in highly original and imaginative ways in media appropriate to the situation. The product of their creativity reveals the students' interest and grasp of the subject as well as an insight into the subject. Given the opportunity for self-expression, a student may integrate more than one talent to express his feelings and understanding. Visually orientated students may express their reaction to poetry through another medium, very often a sketch or drawing using color and form in imaginative interpretation of their reading. Some students show great organizational ability when developing a theme for a prom or school program. Some may find a contest challenging. Others may use music to express their feelings. The self-assured student feels free to

convey his interest and ideas in an original way both in content and construction. The student very often reveals his innermost thoughts and emotions in such projects.

Application

Original expression may be encouraged in any subject area. Opportunity for visual interpretation of reading should be incorporated at every grade level. Original writing as a free time activity should be encouraged. Teachers should recognize the visual-minded child's need to express his emotions and ideas in creative art endeavors. Contests and bulletin board displays offer an opportunity for individual expression on a voluntary basis. Outstanding projects might be put on display. Demonstrations of the use of items in nature for decorative purposes might be made to the class.

For further suggestion see also "Teacher Strategies" section of this booklet, Areas: 1, 2, 3, 4 and 5.

RATIONALE

Goal Seven - Area 6

STUDENT DEMONSTRATED EXPERTISE IN WRITTEN OR ORAL COMMUNICATION.

Description

Behaviors in this area demonstrate exceptional ability in written and oral communication--often judged beyond the expected for grade level in difficulty, quality, or expertise. For example: students use a foreign language as a tool; a student demonstrates the ability to "sell a product"; a student demonstrates unusual ability to reason; others dramatize written or self-composed material; another delivers a "shock" opening statement to spur discussion; many demonstrate insight and original thinking in their interpretation of written material.

Analysis

In general the behaviors in this area result from assignments by the teacher. Characteristically, these behaviors reflect a well developed reading comprehension, a good grasp of vocabulary, and master of communication skills both oral and written. Students demonstrate originality of style, ability to reason or astute observation in their written communication. In verbal communication students may demonstrate insight and the ability to interpret and evaluate written material. Students demonstrate competency in basic skills and creativity in producing work specifically suited to a situation. The behaviors of these students are sufficiently consistent that the observer can identify the value of his product and the student himself is willing to be so identified as he is aware of his ability. Such students deliberately examine a variety of viewpoints and techniques with the intention of creating outstanding endeavors, taking pride in personal success.

RATIONALE

Goal Seven - Area 6

Application

Teachers can encourage spontaneity by stimulating discussion and original thinking. Children must be taught that unusual and original ideas are valuable and be given the freedom to express themselves without fear of ridicule. Children should be encouraged to let their imaginations roam and to express their thoughts and feelings freely. They should be urged to question. The teacher should encourage creative writing when making assignments and should offer constructive criticism sprinkled with praise.

For further suggestions see also "Teacher Strategies" section of this booklet, Areas: 1, 2, 4, 5 and 7.

RATIONALE

Goal Seven - Area 7

STUDENT PRODUCED AN EFFORT OF ARTISTIC OR UTILITARIAN MERIT, OR EXEMPLIFYING GOOD ORGANIZATION OR DESIGN.

Description

The behaviors in this area are primarily self-motivated. The effort might be an object unusual in design or repaired in an unusual way using readily available materials. In some cases the student makes something to meet the needs of a specific situation such as costumes or food items. Some students incorporate their artistic talent in original art design, photographic displays, effectively arranged materials or visual presentations. Many of the behaviors in this area are closely related to those in Area Five.

Analysis

Students here demonstrate skills learned in art and vocational classes. Behaviors in this area cover a wide range of effort. Skill in construction, repair, or design may be made manifest in useful products. It is necessary for an individual to gain many experiences in a variety of activities and to be able to apply them in innovative ways to meet the demands of daily living. The student should be motivated to aim for products which are both creative and of good quality.

Application

Youngsters think imaginatively in many different ways. Rather than trying to set a pattern for them to follow, their imagination should be given a free rein. Teachers should allow a student to deviate from the expected, and encourage students to express themselves in the medium in which they show compentency. The teacher should provide basic instruction, directions, samples, then let the child create.

RATIONALE

Goal Seven _ Area 7

The teacher should allow a student to deviate from the expected norm, assignment, requirement, project, etc., or when expedient relax the requirements. The teacher may allow or encourage a student who lacks skill in one (art or written) medium, to use another (art or written) medium. It may be helpful to show appreciation of a student who lacks language communication skills or interests by allowing him to do work in an art or mechanical field. If given the freedom and the encouragement to use what creative skills or talents he has, he is likely to produce.

For further suggestions see also "Teacher Strategies" section of this booklet, Areas: 2, 3, 4, 5 and 6.

RATIONALE

Goal Seven - Area 8

STUDENT DEMONSTRATED MERIT IN THE PERFORMING ARTS OR IN A PHYSICAL ACTIVITY.

Description

Behaviors in this area included writing, presenting, or directing skits, plays, shows, etc., as well as role playing, monologues, and imitations. In the field of music, students wrote songs, compositions, and concerts. Some made improvisions, others prepared and presented musical programs. In the area of physical activities original dance, cheerleading, gymnastics, routines were developed. In organized sports, new games or new "plays" were originated.

Analysis

Behaviors in this area demonstrate fluency in language arts, knowledge of character, ways of treating and presenting ideas in dramatic form. Students demonstrate skill, imagination, talent, and initiative in the performing arts. Characteristically these students tend to strive for perfection in their presentation. Students demonstrate knowledge of techniques in music and ballet and the ability to originate new arrangements and combinations of known patterns through which they express their feelings. They enjoy 'dreaming up' new ideas, games, and routines. They will work tirelessly on their own to achieve their goal. Many may be only average students who are best able to express themselves through body language. Realizing their capabilities, they capitalize on them.

Application

Teachers might urge students to pretend, especially when they are showing difficulty in beginning or achieving a creative effort. It

RATIONALE

Goal Seven - Area 8

is often appropriate to give the class or group of students the opportunity to plan and carry out an activity. Teachers can guide students to choose activities suited to their skills. Basic instructions, directions, and suggestions may be provided prior to involving students in their own creative activity. Teachers could try to encourage them to practice and polish their efforts. Teachers could provide devices such as tape recorders to enable them to criticize their own presentations.

For further suggestions see also "Teacher Strategies" section of this booklet, Areas: 1, 2, 3, 2, 5, 6 and 7.

RATIONALE

Goal Seven - Area 9

STUDENT DEMONSTRATED MERIT IN PROBLEM-SOLVING ABILITY.

Description

The behaviors in this area demonstrate the students' ability to originate mental games, improvise when confronted with lack of equipment or resources, adapt procedures suited to the task at hand, or come up with new, more workable ideas. Other behaviors involve experimentation and testing ideas. Students demonstrate ingenuity in originating activities that benefit themselves and others.

Analysis

Behaviors reported in this area tend to occur in the science and mathematics disciplines. Student demonstrates their ability to apply their scientific knowledge or mathematical skills to new situations. As in Area 6 students demonstrate their ability to reason but in this area it results in actual problem-solving. Students use their knowledge of the sciences to test their own ideas and design experiments to test scientific principals. They utilize operational procedures best suited to the task. Students demonstrate skills in innovation and invention as a result of previous learning.

Application

Children can be encouraged to evaluate their own ideas and techniques in solving problems. Help should be available when needed but it might be wiser to wait until the child asks for suggestions. Teachers can provide opportunities for students to experiment and test their ideas and procedures. The teacher can diagnose deficiencies in understanding procedures and present remedial instruction or elaborate

on areas of student interest. Teachers can use the student originated games as skill building devices. Teachers should make a point of commending students' problem-solving ability, and of encouraging the child to explore, manipulate, experiment, and question.

For further suggestions see also "Teacher Strategies" section of this booklet, Areas: 2, 5 and 7.

RATIONALE

Goal Seven - Area 10

STUDENT DEMONSTRATED ADEPTNESS IN SOCIAL INTERACTION SITUATIONS.

Description

Behaviors in this area occur both in and out of the classroom setting. Students demonstrate their innate leadership qualities, their awareness of social niceties and their interest in involving their peers.

Analysis

Behaviors in this area reflect the student's ability in the communication arts as well as his ability to work with others independent of the teacher. Students rely on the teacher as a critic and resource person rather than as the director of the activity. Behaviors in this area indicate a high level of the student's social maturity. Having acquired basic knowledge and skills, the student is able to make use of them creatively, involving others in activities such as they would be facing in later life.

New situations and new experiences involving others help students to become aware of, and sensitive to the stimuli surrounding them.

Application

By making resources available to children and encouraging them to use them, the teacher can lead students to learn how to use their potential talents as leaders in society. The alert teacher arranges conditions so the student can be involved in social interaction situations. The teacher can take a personal interest in the activity of the student and supply encouragement and praise as well as guidance in their efforts.

For further suggestions see also "Teacher Strategies" section of this booklet, Areas: 3, 5 and 7. See also Goal Nine, Area 4.

SUMMARY OF TEACHER STRATEGIES

Goal Seven

1. TEACHER ENCOURAGED ORIGINALITY, VERBALLY OR THROUGH AN ASSIGNMENT OR DISCUSSION.

2. TEACHER DEVELOPED OR ATTEMPTED TO DEVELOP THE STUDENTS' CREATIVE INTERESTS.

3. TEACHER WAS FLEXIBLE IN RELATING TO STUDENTS.

4. TEACHER GAVE STUDENTS INSTRUCTIONS IN CREATIVE MATTERS OR ENCOURAGED THEM TO DO SOMETHING.

5. TEACHER ALLOWED OR ENCOURAGED A STUDENT WITH TALENT OR A CREATIVE INTEREST TO MAKE USE OF HIS CREATIVE SKILLS.

6. TEACHER AIDED A BORED, DISINTERESTED OR UNENTHUSIASTIC STUDENT BY USING OR ENCOURAGING THE USE OF CREATIVE EFFORTS OR SELF RESPONSIBILITY.

7. TEACHER WORKED AT INCREASING A STUDENT'S SELF-IMAGE.

TEACHER STRATEGIES

Goal Seven

1. TEACHER ENCOURAGED ORIGINALITY, VERBALLY OR THROUGH AN ASSIGNMENT OR DISCUSSION.

   1.1 Teacher encouraged originality; encouraged students to make or write their own material.

   1.2 Teacher gave an assignment of a creative nature, including assignment to make or write something original, but without specific instructions on how it should be done or what exactly should be made.

2. TEACHER DEVELOPED OR ATTEMPTED TO DEVELOP THE STUDENTS' CREATIVE INTERESTS.

   2.1 Teacher, by making the topic or subject interesting or handling the topic in an interesting or imaginative way, aroused the creative interest of a student.

   2.2 Teacher drew on the students' imagination or urged them to pretend, particularly when they were having difficulty either beginning or doing a creative effort.

   2.3 Teacher asked students to imagine they were something else.

   2.4 Teacher had students interpret a creative effort, either visually, orally, or in writing.

   2.5 Teacher used leading questions, discussion, etc. to aid students in thinking creatively or in being creative.

3. TEACHER WAS FLEXIBLE IN RELATING TO STUDENTS.

   3.1 Teacher allowed a student to deviate from the expected norm, assignment, requirement, project, etc.

      3.1-1 Teacher allowed or encouraged a student who lacked skill in one medium, to use another medium.

      3.1-2 Teacher allowed or encouraged a student who lacked language communication skills or interests to do work in an art or mechanical field.

   3.2 Teacher gave class or group of students within a class the opportunity to plan an activity, project, or play.

   3.3 Teacher gave students freedom in choice of subject, style, or medium, within which to work on particular projects.

   3.4 Teacher provided a relaxed classroom atmosphere.

TEACHER STRATEGIES

Goal Seven

4. TEACHER GAVE STUDENTS INSTRUCTIONS IN CREATIVE MATTERS OR ENCOURAGED THEM TO DO SOMETHING.

4.1 Teacher, when student or group of students stated an interest in doing a specific creative effort, provided guidance in the form of basic instructions, knowledge of various methods, directions, samples, suggestions, or pointers.

4.2 Teacher provided knowledge of the technique involved or examples of the creative efforts for a student, a group of students, or the class prior to having them do their own creative work on an assignment.

4.3 Teacher explained or demonstrated to the class how to make or paint something, say something in a foreign language, etc.

4.4 Teacher encouraged a class or student to do something.

5. TEACHER ALLOWED OR ENCOURAGED A STUDENT WITH TALENT OR A CREATIVE INTEREST TO MAKE USE OF HIS CREATIVE SKILLS.

5.1 Teacher had a student or asked a student to display his work, to make a display for, or perform his particular talent in front of the class or school, etc.

5.1-1 Teacher had a student who lacked self-confidence or who was having difficulty in academic subjects demonstrate his talent or skill before the class.

5.2 Teacher allowed or encouraged a student with a specific talent or interest to do additional or more creative work in his area.

5.2-1 Teacher assigned a task which required the use of a student's creative skills.

5.2-2 Teacher arranged for or encouraged additional lessons or experience in the student's field of interest and capability.

5.3 Teacher aided a student who was talented but bored or lacking in initiative by getting him interested in a creative field or a more advanced technique within his field of interest.

TEACHER STRATEGIES

Goal Seven

6. TEACHER AIDED A BORED, DISINTERESTED OR UNENTHUSIASTIC STUDENT BY USING OR ENCOURAGING THE USE OF CREATIVE EFFORTS OR SELF RESPONSIBILITY.

6.1 Teacher gave a problem (or unenthusiastic) student a task or responsibility which required the use of his creative skills, or encouraged him to make use of certain of his creative skills, or asked his opinion.

6.2 Teacher gave a particular handicapped, problem, or unenthusiastic student a specific task or responsibility.

6.3 Teacher gave encouragement to an unenthusiastic or disinterested student or complimented him on his creative endeavor (the thing he made), or indicated he would do well in a certain endeavor, or tried to involve him in the discussion.

6.4 Teacher, in order to motivate a student, arranged for him to hear or see how his work compared unfavorably with that of others in the class.

7. TEACHER WORKED AT INCREASING A STUDENT'S SELF-IMAGE.

7.1 Teacher provided encouragement or showed interest in endeavors of a student who lacked confidence in a skill or creative ability.

7.2 Teacher provided guidance, directions, pointers, hints, etc. for a student who lacked confidence in a skill or creative ability, or talked with him about his interests, hobbies, etc. in order to help him get started.

7.3 Teacher gave a student who was shy or lacked confidence the opportunity to gain confidence through a creative medium.

7.4 Teacher gave verbal assurances or assistance to a student who stated a lack of confidence, or arranged for a favorable comparison of his ideas to those of other students, or challenged him to perform.

7.5 Teacher informed another teacher or student's parents of the student's talent, skill, progress, etc.

BOOKLET 7–A
NEEDS ASSESSMENT

ED 063373
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QUALITY EDUCATION PROGRAM STUDY

CREATIVITY

PENNSYLVANIA
GOAL SEVEN

AN ESEA TITLE III PROJECT
COORDINATED AND DIRECTED BY:
Office of the County Superintendent
Bucks County Public Schools
Division of Curriculum and Instruction
IN COOPERATION WITH:
The Pennsylvania Department of Education

JUNE 1971

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Q.E.P.S. STAFF

Raymond Bernabei, Project Coordinator

Donald L. Wright, Project Director

Ronald E. Lesher, Coordinator of Research

Elbert S. Solt, Associate Director-Bucks County

Russell D. Diers, Supervisory Assistant-Bucks County (1969-71)

Rosemary Tracy, Associate Director-Luzerne County

Kathryn Saunders, Supervisory Assistant-Luzerne County

William K. Keele, Associate Director-Allegheny County

Frances Martin, Supervisory Assistant-Allegheny County

Mary Rita Routh, Supervisory Assistant-City of Pittsburgh (1970-71)

Thomas O. Sheridan, Supervisory Assistant-City of Erie (1969-71)

Stephen S. Berr, Supervisory Assistant-Bucks County (1968-69)

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PUBLIC, PRIVATE, AND PAROCHIAL SCHOOLS

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Albert M. Neiman, Director
Emmett W. Bock, Coordinator

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John L. Kennedy, Director

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Thomas E. Kendig, Director

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Paul B. Campbell, Director

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PREFACE

The Bucks County Schools have for some time been committed to improving the quality of the educational offerings for its youth. Characteristic of that commitment was the manner in which officials of the Pennsylvania Department of Education, Bucks County Public Schools, Luzerne County Public Schools, Allegheny County Public Schools, Penn-Trafford School District, Pittsburgh School District, and Erie School District joined together in 1966 to draft the proposal for the Quality Education Program Study (QEPS). Conceived as a complement to Pennsylvania's pioneering efforts to assess the quality of its schools, the study was designed to define and clarify the Ten Goals of Quality Education adopted by the State Board of Education in 1965.

The following booklet is a part of the story of how Q.E.P.S. went about its ambitious task, and the results of that effort. We trust this statement of the behavioral definitions for Pennsylvania's Ten Goals of Quality Education will serve as a guide for the evaluation and improvement of teaching and learning in the schools of the Commonwealth.

Dr. George E. Raab
County Superintendent
Bucks County Public Schools

INTRODUCTION

In recent years there has been an increased interest in goal definition in education. Most efforts toward the establishment and definition of goals seems to take the form of generalizations or descriptive statements. Little, if any, data is available concerning empirical methods for defining educational goals.

Until recently, the "Goals for Quality Education" were not defined in a coherent form. An analysis of this problem revealed that most stated goals have little exact meaning for the practicing educator. Frequently, goals are stated in such general terms that any educator could convince himself that these goals are the purpose that guide his program. Goals are statements of general educational intents. While it is not absolutely necessary for goals to be stated in performance terms, the more clearly these statements are described, the more readily we can develop valid indicators of pupil behavior.

The first step in constructing an instructional program centers upon the need for a set of objectives. An objective refers to the performance or change in behavior a pupil is to exhibit upon completion of instruction. Therefore, meaningful objectives should relate to the "Goals for Quality Education". If one is "to measure objectively the adequacy and efficiency" of educational programs, these objectives must be described in terms of not what the schools do, but in what children do. One must itemize the kinds of behavior that add up to the goals for quality education if we are ever to know how children progress toward the goals or how efficient an educational program may be in furthering such

progress. Specifying goals in this way poses practical problems.[1]

The formulation and adoption of Pennsylvania's Goals of Quality Education represents a major step toward the definition of the State's educational intents, making possible an assessment of its efforts toward the fulfillment of those intents. In an effort to further increase the utility of the goals to the practitioner and evaluator, the Quality Education Program Study was proposed to review, define, and clarify the Ten Goals. Funded in 1968 under E.S.E.A. Title III, Q.E.P.S. made a unique departure from the usual "armchair philosophy" or logical approach to goal definition by deciding to employ the Critical Incident Technique. This technique was used to collect empirical data to define the goals.

The QEPS staff collected critical incident data from teachers, students, and parents from various urban, suburban, and rural areas throughout the State. These data included both student behaviors indicative of achievement of the Ten Goals and teacher behaviors effective in helping students achieve these Goals.

The resulting descriptions or definitions for each of the Ten Goals include: (1) Student Behaviors, (2) Rationales or narrative explanations, and (3) Teacher Strategies. Also, for each Goal QEPS has developed needs assessment instruments to provide the practitioner with a mechanism to systematically gather information to assess its needs and assign priorities to those needs.

[1]Educational Testing Service. A Plan for Evaluating the Quality of Educational Programs in Pennsylvania. Volume One: The Basic Program. Princeton, New Jersey: ETS, Henry S. Dyer, Project Director, Chapter I, pages 1-4 (June 30, 1965).

It is hoped that the resulting products of three years of intensive work devoted to defining Pennsylvania's Ten Goals of Quality Education will provide various segments of the educational community with information and the means to continue to improve the quality of education for the students of Pennsylvania.

Raymond Bernabei
Assistant Superintendent
Bucks County Schools

Donald L. Wright
Project Director, O.E.P.S.

PROJECT REPORTS

The following is a listing and brief description of the reports produced by the Quality Education Program Study:

Booklet A	Project Description A description of the project including a background and overview and a detailed report of procedures used to collect, handle, and analyze the data. Includes an appendices.
Booklet B	General Needs Assessment Instructions General Needs Assessment Instrument for the Ten Goals.
Booklet C	Characteristics of Incidents and Their Reporters Gives a tabulation of various characteristics of reporters for each category and sub-category of student behavior.

Goals One through Ten each have two reports. The first is a Description of the goals, containing three basic components: (1) the categories of student behavior, (2) rationales for the areas of effective student behavior, and (3) related teacher strategies. The second report is related to the Needs Assessment of that goal and contains: (1) Instructions, (2) the general needs assessment instrument for that goal, and (3) an analysis of instruments related to that goal. The booklets for the Ten Goals are:

	Goal One - Self Understanding
Booklet 1	Description
Booklet 1A	Needs Assessment
	Goal Two - Understanding Others
Booklet 2	Description
Booklet 2A	Needs Assessment
	Goal Three - Basic Skills
Booklet 3	Description
Booklet 3A	Needs Assessment

	Goal Four - Interest in School and Learning
Booklet 4	Description
Booklet 4A	Needs Assessment
	Goal Five - Good Citizenship
Booklet 5	Description
Booklet 5A	Needs Assessment
	Goal Six - Good Health Habits
Booklet 6	Description
Booklet 6A	Needs Assessment
	Goal Seven - Creativity
Booklet 7	Description
Booklet 7A	Needs Assessment
	Goal Eight - Vocational Development
Booklet 8	Description
Booklet 8A	Needs Assessment
	Goal Nine - Understanding Human Accomplishments
Booklet 9	Description
Booklet 9A	Needs Assessment
	Goal Ten - Preparation for a World of Change
Booklet 10	Description
Booklet 10A	Needs Assessment

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NEEDS ASSESSMENT INSTRUMENTS

General

The general needs assessment instrument is comprised of sixty-three (63) area behavioral statements which encompass all of the Ten Goals of Quality Education. These area statements capsulize the various behaviors of the category scheme derived from student behaviors reported by teachers, parents and students.

Individual

The individual needs assessment instrument is a compilation of the behavior statements taken from the category scheme. These phrases or statements have been edited to accommodate their usage by elementary age children. (The individual needs assessment will be found for the appropriate goal in booklets 1A through 10A).

Test Instrument

The test instruments are a compilation of available tests relating to the Ten Goals of Quality Education. (The test instruments will be found for the appropriate goal in booklets 1A through 10A).

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PURPOSE OF NEEDS ASSESSMENT INSTRUMENTS

General

The general needs assessment instrument can provide the means for a school district to assess its needs relative to the Ten Goals of Quality Education. The need for such assessment may be generated as a result of the Pennsylvania State Quality Assessment Program, or a self-initiated need to identify strengths of the educational program or to identify areas in which greater concentration may be deemed advisable. This instrument could also serve as a medium to acquaint constituents (parents and students) with the Goals of Quality Education.

Individual

The individual needs assessment instrument is designed primarily for student use, under the direction of the teacher. The purpose would be the individual student assessment of his behavior relating to the specific behavioral categories of one or more of the Goals of Education.

HOW TO USE THE GENERAL NEEDS ASSESSMENT INSTRUMENTS

General

This instrument is designed for parent, student, teacher and administrative use, or any combination of these.

The instrument included in this booklet has a rating scale from "most important" through "least important" with accompanying numerals five (5) through one (1). For illustrative purposes, let us assume a school district would request a community group to identify (in their opinion) the most important things the school is or should be accomplishing.

The group would be instructed to read the statement in bold print and the clarifying material below. They should then determine the importance of the area by placing a check above the number representing the priority they consider appropriate in that area. Tabulation would consist merely of adding the total scores for each area. The areas having the highest total score would reflect the group's priority relating to the school program.

Another approach for the use of this instrument would be to transcribe each statement and explanation on separate cards. This would allow the user to sort the items into priority stacks. Five envelopes could be provided and labeled "most important" through "least important".

There are some advantages to using cards. If the school district would utilize the instrument with several groups, or more than once with one group, the cards can be used and reused since no pencil checking is involved. A "free sort" would

simply require the placing of the cards in the appropriately labeled envelope and the tabulation would be the same as the check list tabulation. This "free sort" method might be desirable to compare priority ratings of different groups.

If a district desires, it can structure the sorting process by a "forced sort". The "forced sort" could require equal numbers of cards in each priority envelope or specify a number not to be exceeded in the "most important" and "least important" envelopes and let the others fall somewhere in the three remaining categories of "important", "average importance" or "marginal importance". The "forced sort" would force a few, manageable, top priority items for the school district to determine a course of action to pursue.

School districts may want to compare goal priorities of college oriented parents vs. another group or the school staff itself. Obviously, discretion must be practiced if comparisons are to be made outside of the school community.

The above illustrations allow school districts flexibility for local uses and needs. They are simply illustrations. Local districts may create innovative approaches with the material for their own use.

GENERAL NEEDS ASSESSMENT INSTRUMENT

GOAL SEVEN - CREATIVITY

Quality Education should give every child opportunity and encouragement to be creative in one or more fields of endeavor.

	1 Least Important	2 Marginal Importance	3 Average Importance	4 Important	5 Most Important
Areas 1, 2, 3 - PRODUCES THINGS THAT ARE UNIQUE. Draws something, makes a model or chart, etc., to go with a class report or project; makes or tries something he has not tried before; goes beyond a class demonstration or lesson; prepares food, sews something or writes a creative poem, story or essay.	1	2	3	4	5
Area 4 - RESEARCHES INFORMATION. Researches material to write a report that is not assigned; to prepare for a job, or to give a report a different or unusual treatment.	1	2	3	4	5
Area 5 - USES UNUSUAL TREATMENT OF SCHOOL WORK. Draws an original picture or makes an original project or invention; presents ideas in a new way; draws sketch or picture that expresses a poem or story.	1	2	3	4	5
Area 6 - USES UNUSUAL WRITTEN OR ORAL COMMUNICATION. Can reason through use of words; writes unusual phrases, headings; gives a report in an unusual way, can report easily and convincingly.	1	2	3	4	5

GOAL SEVEN - CREATIVITY

	1 Least Important	2 Marginal Importance	3 Average Importance	4 Important	5 Most Important
Area 7 - PRODUCES UNUSUAL ARTISTIC DESIGN OR ORGANIZATION.	1	2	3	4	5
Makes original art design; designs a costume for a particular use; makes an effective arrangement of materials; shows unusual talents.					
Area 8 - SHOWS UNUSUAL TALENT IN PERFORMING ARTS OR PHYSICAL ACTIVITY.	1	2	3	4	5
Prepares, presents, or directs a show, skit, etc.; writes a song or music, composes a ballet; develops a dance; does an athletic stunt learned on his own.					
Area 9 - SHOWS PROBLEM-SOLVING ABILITY	1	2	3	4	5
Puts an object together without directions; does mathematical puzzles; makes up a game; suggests a better way of doing something; designs an experiment for science.					

HOW TO USE THE INDIVIDUAL NEEDS ASSESSMENT INSTRUMENT

This instrument is designed for self-evaluation or assessment by students. The teacher may select one of the ten Goals of Quality Education, distribute the instrument for that Goal and request the students to place a check above the corresponding number representing "always" through "never". Evaluation of the check lists would reveal the individual strengths and weaknesses relative to a particular Goal.

Those behaviors receiving low scores would indicate both to the student and teacher behavioral goals to which the student should aspire. Pursuit of these goals could entail teacher-student planning of mini-units of study or projects to bring about the desired behavior. On the basis of this, teachers could collaborate on developing units of study or projects to accommodate those students who scored low on the various behavioral items.

INDIVIDUAL NEEDS ASSESSMENT INSTRUMENT

GOAL SEVEN - CREATIVITY

Quality Education should give every child opportunity and encouragement to be creative in one or more fields of endeavor.

	Never	Seldom	Usually	Often	Always
	1	2	3	4	5

Area 1 - PRODUCES THINGS THAT ARE UNIQUE.

1.1	Makes a picture or a model to add to, illustrate, or explain a class report.	___ 1	___ 2	___ 3	___ 4	___ 5
1.2	Makes a visual aid, chart, movie, model, etc., based on material discussed in class.	___ 1	___ 2	___ 3	___ 4	___ 5
1.3	Makes a model, chart, etc., as a learning aid.	___ 1	___ 2	___ 3	___ 4	___ 5
1.4	Makes a chart that effectively pictures class jobs or activities.	___ 1	___ 2	___ 3	___ 4	___ 5
1.5	Makes a suggestion to liven up class activity or interest.	___ 1	___ 2	___ 3	___ 4	___ 5
1.6	Brought something to class for the purpose of adding to class interest.	___ 1	___ 2	___ 3	___ 4	___ 5
1.7	Starts and adds to an interesting or useful classroom activity.	___ 1	___ 2	___ 3	___ 4	___ 5
1.8	Asks for materials presented in another class, as he is interested in the topic.	___ 1	___ 2	___ 3	___ 4	___ 5

INDIVIDUAL NEEDS ASSESSMENT INSTRUMENT

GOAL SEVEN - CREATIVITY

		Never	Seldom	Usually	Often	Always
		1	2	3	4	5
Area 2 - PRODUCES THINGS THAT ARE UNIQUE.						
2.1	Makes something or tries something he has not tried before.	1	2	3	4	5
2.2	Makes a model or other object, when given an assignment.	1	2	3	4	5
2.3	Makes something different in method, material, and effect, when given an assignment.	1	2	3	4	5
2.4	Makes something different in that it is useful.	1	2	3	4	5
2.5	States a desire to or does work in an area in the arts new to him.	1	2	3	4	5
2.6	Goes beyond art class demonstration and puts his own ideas in his effort.	1	2	3	4	5
2.7	Develops content or method on his own, different from other students, in giving a presentation.	1	2	3	4	5
2.8	Chooses a subject or adds material different from other students, when given an assignment.	1	2	3	4	5
2.9	Does an original work, based on, but different in form and content from, an identified source.	1	2	3	4	5

INDIVIDUAL NEEDS ASSESSMENT INSTRUMENT

GOAL SEVEN - CREATIVITY

		Never	Seldom	Usually	Often	Always
		1	2	3	4	5
Area 3 - PRODUCES THINGS THAT ARE UNIQUE.						
3.1	Decorates something when it is probably not required.	1	2	3	4	5
3.2	Chooses to do creative work in an art activity.	1	2	3	4	5
3.3	Does an original art work (not necessarily of exceptional quality).	1	2	3	4	5
3.4	Makes a film.	1	2	3	4	5
3.5	Writes a song.	1	2	3	4	5
3.6	Hand-makes an object (not necessarily original or of exceptional quality).	1	2	3	4	5
3.7	Sews an item, using a pattern.	1	2	3	4	5
3.8	Prepares a food item.	1	2	3	4	5
3.9	Arranges food he has made in an attractive manner.	1	2	3	4	5
3.10	Writes an original work.	1	2	3	4	5
3.11	Makes an original work mostly as a gift for someone.	1	2	3	4	5
3.12	Adds things that have already been made to decorate an object or a room.	1	2	3	4	5
3.13	Makes things to serve as decorations.	1	2	3	4	5

INDIVIDUAL NEEDS ASSESSMENT INSTRUMENT

GOAL SEVEN - CREATIVITY

	Never	Seldom	Usually	Often	Always
	1	2	3	4	5
3.14 Decorates a bulletin board.	1	2	3	4	5
3.15 Chooses a very different costume, habit of dress; decorated his clothing in some manner.	1	2	3	4	5
3.16 Chooses and arranges a hair style for a person or occasion.	1	2	3	4	5
3.17 Plans or does rearrange furniture in a room.	1	2	3	4	5
3.18 Volunteers for or asks to do a creative activity.	1	2	3	4	5
3.19 Tries to do something creative, after being encouraged.	1	2	3	4	5

INDIVIDUAL NEEDS ASSESSMENT INSTRUMENT

GOAL SEVEN - CREATIVITY

	Never	Seldom	Usually	Often	Always
	1	2	3	4	5
Area 4 - RESEARCHES INFORMATION.					
4.1 Does research to get information in producing an effort.	1	2	3	4	5
4.2 Writes an original work and asks a teacher or other person for help, criticism, or evaluation.	1	2	3	4	5

INDIVIDUAL NEEDS ASSESSMENT INSTRUMENT

GOAL SEVEN - CREATIVITY

	Never	Seldom	Usually	Often	Always
	1	2	3	4	5
Area 5 - USES UNUSUAL TREATMENT OF SCHOOL WORK.					
5.1 Selects an unusual subject, theme, or symbol for an object he has made.	___ 1	___ 2	___ 3	___ 4	___ 5
5.2 Picks an unusual content, theme, or symbol for an art effort.	___ 1	___ 2	___ 3	___ 4	___ 5
5.3 Does an original art work after being given ideas by contact with a book or a work of art.	___ 1	___ 2	___ 3	___ 4	___ 5
5.4 Writes an original work with different content.	___ 1	___ 2	___ 3	___ 4	___ 5
5.5 Takes photographs with unusual subject matter.	___ 1	___ 2	___ 3	___ 4	___ 5
5.6 Makes a bulletin board using a certain subject he has picked.	___ 1	___ 2	___ 3	___ 4	___ 5
5.7 Develops an unusual theme that suits the occasion.	___ 1	___ 2	___ 3	___ 4	___ 5
5.8 Makes a food item that represents a symbol, an object, etc.	___ 1	___ 2	___ 3	___ 4	___ 5
5.9 Uses things from nature for decoration purposes.	___ 1	___ 2	___ 3	___ 4	___ 5
5.10 Presents a demonstration on a subject of interest to him.	___ 1	___ 2	___ 3	___ 4	___ 5

INDIVIDUAL NEEDS ASSESSMENT INSTRUMENT

GOAL SEVEN - CREATIVITY

	Never	Seldom	Usually	Often	Always
	1	2	3	4	5
Area 6 - USES UNUSUAL WRITTEN OR ORAL COMMUNICATION.					
6.1 Writes a more difficult product than is asked for or assigned (but it is not necessarily original or different).	___ 1	___ 2	___ 3	___ 4	___ 5
6.2 Does original work judged to be beyond his grade level in quality of content and/or writing.	___ 1	___ 2	___ 3	___ 4	___ 5
6.3 Writes work which is different because it shows foreign language skills.	___ 1	___ 2	___ 3	___ 4	___ 5
6.4 Communicates by word of mouth easily and convincingly.	___ 1	___ 2	___ 3	___ 4	___ 5
6.5 Shows he is able to reason through the use of words.	___ 1	___ 2	___ 3	___ 4	___ 5
6.6 Acts out the reading of written material.	___ 1	___ 2	___ 3	___ 4	___ 5
6.7 Acts out with words material that he has developed himself.	___ 1	___ 2	___ 3	___ 4	___ 5
6.8 Shows by what he says that he understands and has original thoughts when evaluating written material.	___ 1	___ 2	___ 3	___ 4	___ 5
6.9 Writes unusual phrases, headings, slogans for an effort.	___ 1	___ 2	___ 3	___ 4	___ 5
6.10 Writes a work which is especially suited to the situation.	___ 1	___ 2	___ 3	___ 4	___ 5

INDIVIDUAL NEEDS ASSESSMENT INSTRUMENT

GOAL SEVEN - CREATIVITY

	Never	Seldom	Usually	Often	Always
	1	2	3	4	5
Area 7 - PRODUCES UNUSUAL ARTISTIC DESIGN OR ORGANIZATION.					
7.1 Produces an art effort which is a good example of artistic quality.	1	2	3	4	5
7.2 Makes an interesting photographic display.	1	2	3	4	5
7.3 Sews an item felt to be hard to make.	1	2	3	4	5
7.4 Makes a food item without a recipe or makes up her own recipe.	1	2	3	4	5
7.5 Sews something original.	1	2	3	4	5
7.6 Makes an object unusual in its construction or design.	1	2	3	4	5
7.7 Makes something to meet the needs of a certain situation.	1	2	3	4	5
7.8 Uses unusual materials or common materials in an unusual way, when making or repairing an object.	1	2	3	4	5
7.9 Originates and sews an item out of common, easily obtained materials.	1	2	3	4	5
7.11 Uses a different method of visual presentation, when given a written assignment.	1	2	3	4	5

INDIVIDUAL NEEDS ASSESSMENT INSTRUMENT

GOAL SEVEN - CREATIVITY

	Never	Seldom	Usually	Often	Always
	1	2	3	4	5
Area 8 - SHOWS UNUSUAL TALENT IN PERFORMING ARTS OR PHYSICAL ACTIVITY.					
8.1 Prepares, presents or directs a show or skit.	1	2	3	4	5
8.2 Acts or performs in a play.	1	2	3	4	5
8.4 Enjoys making up an imaginative, pretend situation.	1	2	3	4	5
8.5 Used talent and knowledge to perform a song in a foreign language.	1	2	3	4	5
8.7 Writes an unusual or interesting song.	1	2	3	4	5
8.8 Prepares and presents a concert.	1	2	3	4	5
8.9 Prepares and presents an original piano composition.	1	2	3	4	5
8.10 Composed a ballet.	1	2	3	4	5
9.11 Originates or performs a physical activity.	1	2	3	4	5
8.12 Makes up new games for gym equipment or new plays for a team sport.	1	2	3	4	5
8.13 Develops a different way to do a physical activity.	1	2	3	4	5
8.14 Demonstrates a skill in athletics learned on his own, above the normal level.	1	2	3	4	5

INDIVIDUAL NEEDS ASSESSMENT INSTRUMENT

GOAL SEVEN - CREATIVITY

	Never	Seldom	Usually	Often	Always
	1	2	3	4	5
Area 9 - SHOWS PROBLEM-SOLVING ABILITY.					
9.1 Makes up a game.	1	2	3	4	5
9.2 Substitutes equipment and materials that are lacking to accomplish a task.	1	2	3	4	5
9.3 Suggests or uses a way of doing a task better than the way it was done before.	1	2	3	4	5
9.4 Makes up a different way of doing a job or solving a problem.	1	2	3	4	5
9.5 Experiments or tests an idea.	1	2	3	4	5
9.7 Shows originality through an idea for an activity that benefits others or himself.	1	2	3	4	5

ANALYSIS OF INSTRUMENTS

The purpose of this section is to provide the Quality Education Program Study with information concerning the identification and selection of test instruments for assessing pupil development with regard to the Program's stated Ten Goals of Quality Education.

The identification and selection of test instruments for the Quality Education Program Study was done at two sites: the University of Alabama and the University of Nevada, Las Vegas. Dr. Sam Leles directed the work at the University of Alabama site, and Dr. James Case directed the work at the University of Nevada, Las Vegas site.

The test instrument identification and selection procedure at both sites was divided into three phases as follows:

Phase 1 — The initial identification at each site of test instruments for all ten goals of the Quality Education Program Study.

Phase 2 — The preliminary screening of the test instruments identified in Phase 1 for Goals I, III (Secondary), V, VIII, IX, and X (University of Nevada, Las Vegas), and Goals II, III (Elementary), IV, VI, and VII (University of Alabama).

Phase 3 — The final screening and analysis of the remaining test instruments from Phase 2.

After completion of Phase 1, the University of Alabama site and the University of Nevada, Las Vegas site, exchanged listings of the instruments thus far identified for all ten goals and completed Phases 2 and 3, using combined listings of instruments from both sites.

An extended description of each of these three phases of the identification and selection procedure as carried out at the University of Nevada, Las Vegas site, follows:

Phase 1 The Initial Identification of Test Instruments for The Ten Goals.

In mid-February, two graduate students at each University site were employed to make the initial identification search of test instruments for all ten goals of the Quality Education Program Study. The graduate students had previous teaching experience in public schools, and had taken considerable course work in testing, test analysis, test selection, etc., during their current graduate studies. All searchers were, therefore, familiar with the sources for the identification of test instruments.

The searchers were instructed to identify all possible instruments for all ten goals. The initial identification listing was to include the following for each instrument: title, form, author or publisher, date, grade level, a brief description of the appropriate uses of the instrument, and a bibliography notation on where the instrument was located during their search.

The criteria for the initial identification of an instrument was that the instrument appropriately measure any characteristic related to the following description of the ten goals:

I - Self Understanding
II - Understanding Others
III - Basic Skills
IV - Interest in School and Learning
V - Good Citizenship
VI - Good Health Habits
VII - Creativity
VIII - Vocational Development
IX - Understanding Human Accomplishment
X - Preparation for a Changing World

The following is a summary of the number of instruments initially identified by goal at the University of Nevada, Las Vegas site, during Phase 1:

I - 63	VI - 44
II - 43	VII - 35
III - 61	VIII - 37
IV - 36	IX - 35
V - 27	X - 28

These numbers of instruments were identified by a thorough search of the facilities at the University of Nevada, Las Vegas, and at the University of California at Los Angeles.

A listing of the above identified instruments was then sent to the Alabama site. A combined listing of the instruments identified at both sites, at the completion of Phase 1, gave the following number of instruments by goal (corrected for instruments concurrently identified at both sites):

I - 74	VI - 65
II - 56	VII - 57
III - 87	VIII - 62
IV - 53	IX - 55
V - 49	X - 50

A table summary of the numbers of test instruments identified and analyzed by goal for the Ten Goals of Quality Education is listed below. This listing and subsequent final selection of goal-related instruments are not to be considered as exhaustive nor listed in priority form.

SUMMARY

Number of Test Instruments Identified and Analyzed by Goal for The Ten Goals of Quality Education

Goal	No. of Instruments Identified in the Initial Search (UA + UNLV)	No. of Duplicate Instruments	No. of Instruments Analyzed	No. of Instruments Selected
I	84	10	74	26
II	65	9	56	18
III	97	10	87	39
IV	59	6	53	14
V	54	5	49	17
VI	71	6	65	20
VII	57	0	57	10
VIII	65	3	62	24
IX	59	4	55	19
X	53	3	50	22
Totals	664	56	608	209

Phase 2 The Preliminary Screening of the Test Instruments Identified in Phase 1.

The University of Nevada, Las Vegas site, performed a preliminary screening of test instruments from the above described combined listings for Goals: I, III(Secondary), V, VIII, IX, and X. The University of Alabama site concurrently performed a preliminary screening of the instruments from the combined listings for Goals: II, III(Elementary), IV, VI, and VII.

The following criteria were used at both University sites for the preliminary screening of the initially identified instruments from Phase 1 relating to each goal.

Goal One

The instrument must measure and/or identify those characteristics or attributes that provide information that would permit an individual to develop a better understanding of himself and his worth to society.

Goal Two

The instrument must measure and/or identify the individual's extent of acquiring understanding and appreciation of persons belonging to social, cultural, and ethnic groups different from his own.

Goal Three

The instrument must measure and/or identify the individual's extent of acquisition and/or mastery of the basic skills in the use of words and numbers.

Goal Four

The instrument must measure and/or identify the individual's acquisition of positive attitudes toward school and toward the learning

process.

Goal Five

The instrument must measure and/or identify habits and/or attitudes of an individual that are associated with responsible citizenship.

Goal Six

The instrument must measure and/or identify the individual's acquisition of good health habits and understanding the conditions necessary for the maintenance of physical and emotional well-being.

Goal Seven

The instrument must measure and/or identify the traits or characteristics encouraging creativity.

Goal Eight

The instrument must measure and/or identify the individual's knowledge and/or understanding of the opportunities open to him for preparing himself for a productive life.

Goal Nine

The instrument must measure and/or identify the individual's knowledge of, and/or understanding of, and appreciation of, human achievement in the natural sciences, the social sciences, the humanities, and the arts.

Goal Ten

The instrument must measure and/or identify those characteristics or attributes of an individual that relate to preparation for a life of change and unforeseeable demands.

Phase 3 The Final Screening and Analysis of The Test Instruments Remaining After Phase 2.

After the preliminary screening of the test instruments in Phase 2, the total number of instruments for each goal was reduced to approximately half.

The following criteria were used at both sites for the final screening and analysis of the test instruments remaining from Phase 2:

Goal One

The instrument must measure and/or identify characteristics and/or attributes of self concept, and knowledge and/or understanding of societal structures and relationships, and his relationship to these. Examples of the foregoing were: social emotional adjustment; response to ideas, people and established institutions; sense of personal worth, personal freedom, belonging; being with others; political, social, and religious values; emotional adjustment; personal preferences; self confidence; needs and problems identification; friendliness; integrity; leadership and responsibility; value complex development; emotional maturity.

Goal Two

The instrument must measure and/or identify traits or characteristics an individual achieves in attempting to understand and appreciate other persons belonging to social, cultural, and ethnic groups. Examples of the foregoing are: social standards, anti-social tendencies, community relations; generalized attitudes toward nationality, racial, and religious groups; a study of what different people will do in different situations; morality and personality traits, perception of others; independence, leadership, interpersonal traits; and social distance.

Goal Three

The instrument must measure and/or identify the individual's extent of acquisition and/or mastery of the basic skills in: acquiring ideas through listening and reading; communicating through writing and speaking; handling mathematical operations, and the ability to reason logically and to respect evidence. Examples of the foregoing were: assessment of reading comprehension, progress and growth; assessment of vocabulary, reading speed and accuracy; measurement of auditory memory and alertness; sound-symbol association ability; sensitivity to grammatical structure; listening ability; understanding of word meaning and sentence meaning; location of information; ability to select central ideas and skim; ability to think critically, draw influences, recognize assumptions and reason logically; spatial and numerical reasoning; measurement of concepts and skills in structure and number; recognition and application of mechanics of writing, building of sentences and paragraphy; measurement of arithmetic problem-solving abilities.

Goal Four

The instrument must measure and/or identify positive attitudes toward school and learning. Descriptions include school life; interest index; attitudes toward disciplinary procedure, play, vocation and school work; opinion of school, interests, and subjects.

Goal Five

The instrument must measure and/or identify knowledge of and habits and/or attitudes associated with: loyalty to the fundamental principles of a free democratic society; effective participation in group activities either as a leader or follower; an appreciation and acceptance of the necessity for earning a living; the acceptance of the basic

ethical values of group living, e.g., honesty, concern for the less fortunate, etc. Examples of the foregoing were: assessment of knowledge and understanding of political participation, government organization and services; familiarity with issues that confront citizens in a democrary, e.g., urban problems, economic affairs, foreign policy; knowledge and understanding of the United States Constitution and federal government policies and political participation; assessment of attitudes toward changing the Constitution; assessment of actual and desired political-social activism; assessment of values relative to political controls; measurement of knowledge and understanding of democratic principles of the United States; understanding of social change; measurement of social conformity, prejudice, and degree of open/closed mind; assessment of active involvement in current social or political problems; identification of economic wants; measurement of appreciation of the role of economic factors in one's life.

Goal Six

The instrument must measure and/or identify health behavior from the viewpoint of student practices; understanding conditions necessary for maintaining good health habits; knowledge and application of safety education concept; practices and attitudes one holds regarding health habits; the causes and effects related to good health.

Goal Seven

The instrument must measure and/or identify factors in creative thinking. Examples of related terms are: logical thinking, divergent thinking, ideational fluency, expressional fluency, optimistic-imagination, style preferences, generalizing, analyzing, synthesizing and evaluating.

Goal Eight

The instrument must measure and/or identify the individual's knowledge and/or understanding of the educational and vocational opportunities open to him for preparing himself for a productive life. It is explicitly implied that the test instruments selected for this goal will also be used for educational/vocational guidance purposes. Examples of the foregoing were: measurement of mental abilities important for academic success and related endeavors outside the classroom; measurement of scholastic ability of students planning to go to college; prediction of success and satisfaction in an occupation; preference for, liking for, or interest in a vocation; assessment of work values; measurement of aptitude for skills in selected occupations; interest in selected occupational activities; measurement of abilities necessary for success in selected occupational fields; measurement of attitudes toward a vocation; assessment of personal qualities related to job success or failure; educational and vocational planning inventories.

Goal Nine

The instrument must measure and/or identify the individual's knowledge of and/or understanding of, and appreciation of, human achievement regarding the transforming conceptions of modern science, basic socialogical and psychological principles, and the differentiation of the worthy from the worthless in the arts and humanities. Examples of these were: measurement of understanding of music and artistic heritage; measurement of knowledge and comprehension of literature; assessment of understanding of recent social and scientific developments; knowledge, understanding, and appreciation of art, music, drama, and philosophy; measurement of awareness of works of famous composers, writers, and

artists; measurement of ability to interpret literary materials; measurement of understanding of general scientific principles, the nature of scientific inquiry and scientific reasoning.

Goal Ten

The instrument must measure and/or identify those characteristics or attributes of an individual that relate to preparation for a life of change and unforeseeable demands. This goal explicitly implies a necessity for continuing education - both formal and/or informal, both recreational and/or vocational (or occupational) - to fill the life-long needs of the individual and society. Selection criteria for test instruments for this goal must, therefore, reflect general interests, attitudes, preferences, etc., toward work and leisure; thus the selected instruments would provide information useful to an individual for future leisure-time and vocational planning - planning that is necessary because of the rapidly changing economic and recreational nature of our world. Examples of these were: identification of behavior preferences; identification of personal problems, e.g., personal finance, planning for future, personal interests; measurement of variability and adaptability; desire for responsibility; interest in self-employment; assessment of aspirations at both idealistic and realistic levels; measurement of independence and resourcefulness; assessment of values which influence manner of coping with life-problems; classification of individual as to type, theoretical-non-theoretical, political-non-political, etc.

TITLE	FORM	AUTHOR OR PUBLISHER	DATE	GRADE LEVEL	DESCRIPTION	REF. NO.
Consequences	One Only	P. R. Christensen Sherrill Supply Co.	1962	9-12	2 scores: Ideational fluency and originality. 10 items. Isolates factors in creative thinking	680
AC Test of Creative Ability	B	Industrial Relations Center University of Chicago	1960	Hi. Sch.& Adult	9 scores. Quality, uniqueness, quantity are tested.	678
Ship Destination Test	A	Sheridan Psychological Services	1955-56	9 & over	General reasoning; subject must perform a series of easy additions and subtractions according to a set of rules	680
Christensen-Guilford Fluency Tests		Christensen and Guilford			4 tests in which the examinee writes words to meet the following criteria: word fluency, ideational fluency, association fluency, expressional fluency.	677
Torrance Tests of Creative Thinking		Personnel Press 28 Nassau Street Princeton, N. J. 08540	1966		10 tests grouped into a verbal and pictorial battery. Scores are based on fluency, flexibility, originality, and elaboration; measures divergent production.	619
Creative Ability Inventory		W. H. Winker Winker Publications 15095 Tracey St. Detroit, Michigan	1961	9-12	Checklist of specific areas of preventive-imagination and optimistic-imagination.	752

A Test of Creative Writing Aptitude and Ability	Elinor Hatch, Curriculum Bulletin, School of Education, University of Oregon, Eugene, Oregon	1942	High Sch.	4 scores: Recognition of Creative writing, synonyms, style preferences, use of figures of speech	753
Test of Critical Thinking	M. T. Macy, Curriculum Bulletin, School of Education, University of Oregon	1951	7-9	Gives 7 scores: Inquiry, interest, relationships, openmindedness, generalizations, accuracy, total.	754
Creativity Problem Test	David Miles Southern Illinois University Carbondale, Ill.	1968	High Sch.	Contains five test problems. Student reacts.	680
Novelty Experiencing Scale	Pamela H. Pearson Univ. of Illinois Medical Center Chicago, Ill. 60680 (Printed in Reference 547)			A self report, preference format consisting of four 20-item subscales, each of which measure one of the four forms of novelty experiencing: external sensation, internal sensation, external cognitive, internal cognitive. No time limit.	547

I N D E X

GOAL (Cross Reference)	REFERENCE	CODE NO.
#7	Pearson, Pamela H., "Relationships Between Global and Specified Measures of Novelty Seeking," Journal of Consulting and Clinical Psychology, XXXIV, No. 2 (1970). pp. 199-204.	547
#7	Anastasi, Anne. Psychological Testing, (Third Edition), The Macmillan Co.: New York, 1969. p. 378.	619
#7, #9	Anastasi, Anne. Psychological Testing, Third Edition, Macmillan Co.: London, 1968. p. 372.	677
#7	Ibid., p. 372	678
#7	Buros, O. K., The Sixth Mental Measurements Yearbook, New Jersey: The Gryphon Press, 1965. p. 547.	680
#7	Buros, O. K. Tests in Print. Highland Park: The Gryphon Press, 1961. p. 1230.	752
#7	Buros, O. K. Tests in Print. Highland Park, New Jersey: The Gryphon Press, 1961. p. 494.	753
#7	Buros, O. K. Tests in Print. Highland Park: The Gryphon Press, 1961. p. 1537.	754